

AMENDMENTS TO THE CLAIMS

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1. (currently amended): A receiver ~~for regenerating a signal wave from a received wave that is amplitude modulated~~, comprising:

a variable gain controller for performing variable gain adjustment of detection data generated by detection of a received wave that is frequency-converted to an intermediate frequency signal to the detection data having a constant level via digital signal processing, and a noise clamping section for performing noise clamping of the detection data having the constant level output from said variable gain controller via digital signal processing.

2. (original): The receiver according to claim 1, wherein

said variable gain controller comprises:

a digital low pass filter for integrating detection data to generate DC component data,

a digital divider for dividing predetermined first reference data to indicate a detection data level by the DC component data generated by said digital low pass filter, and a digital multiplier for multiplying division data output from said digital divider via said division by the detection data to generate the detection data having a constant level.

3. (currently amended): The receiver according to claim 1, wherein said noise clamping section comprises:

a digital comparator for comparing predetermined second reference data to indicate a clamp level with the detection data having a constant level and outputting the comparison results, and

a selector circuit for outputting the detection data having a constant level as the data for the signal wave when the detection data having a constant level is smaller than the second reference data, and outputting the second reference data as the data for the signal wave when the detection data having a constant level is larger than the second reference data.

4. (currently amended): The receiver according to claim 2 claim 3, further comprising:

a digital multiplier for multiplying the first reference data by a predetermined scale factor so that the second reference data is generated; and

wherein said noise clamping section comprises a digital comparator for comparing predetermined second reference data to indicate a clamp level with the detection data having a

constant level and outputting the comparison results, and a selector circuit for outputting the detection data having a constant level a when the detection data having a constant level is smaller than the second reference data, and outputting the second reference data when the detection data having a constant level is larger than the second reference data.

5. (new): The receiver of claim 3, wherein the data output from the selector circuit is signal wave data.

6. (new): A receiver comprising:

a frequency converting circuit converting a received signal to an intermediate frequency signal;

a detection circuit generating a detection signal in an audio frequency band from said intermediate frequency signal;

an automatic gain controller circuit performing variable gain adjustment of said detection signal through digital signal processing thereby forming detection data having a constant level; and

a noise clamping circuit performing noise clamping of the constant level detection data through digital signal processing.

7. (new): The receiver of claim 6, wherein the detection signal generated by said detection circuit is an analog detection signal and an analog to digital converter converts the

analog detection signal to a digital detection signal and outputs the digital detection signal to the automatic gain controller circuit.

8. (new): The receiver according to claim 6, wherein

said automatic gain controller circuit comprises:

a digital low pass filter for integrating detection data to generate DC component data,

a digital dividing circuit for dividing predetermined first reference data to indicate a

detection data level by the DC component data generated by said digital low pass filter, and

a digital multiplier circuit for multiplying division data output from said digital dividing

circuit via said division by the detection data to generate the detection data having a constant

level.

9. (new): The receiver according to claim 6, wherein

said noise clamping circuit comprises:

a digital comparator for comparing a predetermined second reference data with the

detection data having a constant level and outputting the comparison results, and

a selector circuit for selectively outputting the detection data having a constant level

based on the comparison results of the digital comparator.